DOCUMENT RESUME

ED 181 376 CG 014 111

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TITLE Psychosocial Ecosystems: A Multilevel Model.
INSTITUTION Greater Kansas City Mental Health Foundation.
PUB DATE 2 Sep 79
NOTE 44p.; Paper presented at the Annual Convention of the American Psychological Association (87th, New York, NY, September 1-5, 1979)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adolescents; Black Mothers; *Blacks; *Community Involvement; Factor Analysis; Family Relationship; *Family Structure; Interaction Process Analysis; *Life Style; *One Parent Family; *Parent Child Relationship; Parent Role; Research Projects; State of the Art Reviews

ABSTRACT

Many ecological and systems research investigations first factor-analyzed community participation patterns of mid-adolescent Black males, as well as the childrearing practices, life styles, and community setting available to mothers during their sons' lives from preschool through high school years. This single parent Black family appeared to be a resilient and generally effective unit, with positive outcomes most typical for mid-adolescent males. Mothers frequently adopted life style strategies based on resources available from a complex of community systems most often organized around employment, informal social networks within the Black community, and limited public agency resources. Psycho-social functioning appears to be impacted not only by internal family process but also by complex patterns of interaction among family members and the surrounding community. (Author)

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ED181376

Psychosocial Ecosystems: A Multilevel Model

American Psychological Association, New York, September 2, 1979

Symposium: Ecological Models: Contributions to Current Social and Mental Health Issues

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This work was supported in part by grants from the Center for Minority Group Mental Health Programs, NIMH (MH24858, MH28281).

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Abstract

Only recently has an increasing body of ecological and systems research been applied to community and clinical areas. This perspective offers a sharp contrast to traditional models, as illustrated in several studies reviewed: particularly an ongoing study of black single parent families.

The community participation patterns of mid-adolescent black males were first factor analyzed, as were the childrearing practices, lifestyle, and community settings available to mothers during son's life from preschool to high school years. The single parent black family appears to be a resilient and generally effective unit, with positive outcomes most typical for mid-adolescent males. Mothers frequently adopt lifestyle strategies which are based on the resources available from a complex of community systems, most often organized around employment, informal social networks within the black community, and limited public agency resources.

While results are still in preliminary form, it seems likely that psychosocial functioning is impacted not by internal family process alone but by complex patterns of interaction among family members and the surrounding community.

The implications of the ecosystems model are also discussed based on selected literature applicable to community mental health, service delivery systems, and therapeutic approaches.

The application of ecosystem models to clinical and community issues holds great promise at the theoretical level. The community may be viewed from a general systems perspective, as an organizational entity composed of subsystems and of levels of organization which have both predictable internal processes and interactions across systems and levels. The total system may be subdivided either by populations or by environments: within each specific comparison subgroup or environmental unit, data may describe group characteristics, the effects of conditions on behavior, or the interaction of persons and environments. The individual is embedded in this total system, but acts differentially in the multiplex of settings which form the individual life space.

The application of this perspective to clinical and social issues has occurred largely in the last decade. Early therapeutic approaches were most often based on trait theories and focused on individual characteristics; with the advent of more situational models, such as those reflected in behavioral and learning therapies, the impact of external conditions remained focused on molecular interactions rather than the relationship of individual and global context. Field theories, organismic theories, and systems approaches extending back to the seminal work of Burgess (1926) have frequently been translated into service delivery models and clinical procedures.

The data selected for presentation in this paper, based on an ongoing study of single parent black families, are intended to illustrate both the potential relevance and the substantive methodological and inferential problems encountered in applying an ecosystems model to clinical, community, and social issues. Much of the research on black families has been criticized as based on the questionable assumption of an isomorphic relationship

between disadvantaged social position and psychosocial functioning (Kuhn, 1972). At the same time, studies of black populations have been questioned to the extent that they attribute to ethnic status or personality what may be largely a function of environmental demands (Baughman, 1971). Credible research on the psychosocial development of black youth must account for multiple sources of influence, including interaction with the immediate surrounding community, the mediating effects of the family system, and the role of individual choice and perceptions in the accessible lifespace. Taylor's (1973) review of findings in this area presents a strong argument that the development of black youth be viewed as a continuing process in which a sequence of choices interacts with experiences in specific environmental settings. Similar considerations have been applied to the provision of mental health services and to the assessment of treatment techniques and outcomes (Wilkinson, O'Connor and Daniels, 1979).

With the foregoing issues in mind, the purpose of this paper and its subsequent organization falls into three areas. First, core findings representing consistent patterns of results will be reviewed from the existing body of ecological and systems interactional research. The review is intended to be selective, providing a basis for the specific data to be reported and for discussion of the application of multilevel models to clinical and social issues. Second, selected results from an ongoing study of single parent black families will be presented; the results represent a part of an extended series of research efforts to describe the complex interactions which occur among individual characteristics, specific subsystems such as the family, and more global community processes as these may impact patterns of behavior in black youth. Third, discussion includes not only consideration of the results reported but also the translation of ecological

and systems models to contemporary social and clinical issues; as such, it is intended to suggest both the potential and the problems inherent in a psychosocial ecosystems perspective.

Core Findings: Selected Review

Behavior Setting Theory and Research One major thrust in describing the natural environment has come from ecological psychology. Barker's (1968) description of the behavior setting as a naturally occurring unit within the total community has served as the basis for an extensive body of research. The behavior setting is a "behavior-milieu complex" which has boundaries both in the physical and behavioral realms so that its independence from other behavior setting units can be calculated. For example, the football field and the playing of the game have the same boundaries, the behavior is consistent and intimately interconnected with the physical objects with which the environment is filled and the particular "playing football-football playing environment" can be clearly distinguished from other settings in the total community.

Much of the early work of Barker and his associates (1960) was focused on the effects of small settings on behavior. The work of Wright (1969) comparing small and large communities and the work of Barker and Gump (1974) comparing large and small schools generated a number of further studies demonstrating the consistency of behavior across individuals occupying the same settings. Small settings were associated with such variables as increased satisfaction, higher performance and responsibility level, increased difficulty and importance of task, greater variety of activities, greater acceptance of members, greater importance of individual members,

greater activity by individual members, greater acceptance of individual differences, and greater self-identity (Bechtel, 1974). Willem's review in 19 4 demonstrated consistent differences in behavior in terms of: frequency, depth, and range of participation (21 studies), communication and social interaction (10 studies), and individual reported experience (9 studies). With accumulating research, the effects of setting size were seen to be related to the capacity and available population for a given organization or setting (Wicker, 1968). The relationship between setting and population, termed "undermanning theory", has generated further research on optimal levels of population-setting interaction as well as the effects of higher and lower ratios of persons to setting(s). Wicker's (1969, 1971) research, for example, suggested it is the experience of being in a performer role which is the determinant of associated positive undermanning experiences noted in prior research. Differences in satisfactions reported by students in large and small school settings may also be affected by such factors as the achievement level and ability of the individual (Wicker, 1972). But in general, as noted in Bechtel's 1974 reevaluation of Barker's original postulates, the contribution of external conditions has been supported.

While the impact of organizational and setting characteristics on behaviors such as satisfaction and performance level has obvious relevance for community mental health, applications have been made on a limited basis in clinical settings. Srivastava (1974), for example, compared subpopulations of staff and patients on an inpatient mental health ward. The proportion of performers to activities for staff suggests extreme undermanning (1 to 7.7), while the proportion of patients to activities suggests overmanning (1 to 0.8). In ecological terms, the pressure of the environment on staff

is in the direction of extending the range of activities and level of responsibility; in fact, the pressure was sufficiently great that staff reported dissatisfaction, lack of time, lack of equipment, frustration with levels of responsibility, and similar indications of poor morale. Staff were observed to be largely occupied with routine administrative matters, effectively minimizing interaction between staff and patients. On the other hand, pressure on the patient population is in the direction of minimizing activity, minimizing the range and level of activity and responsibility, and constricting the range of behaviors demonstrated. While the dehumanizing effects of institutionalization have long been observed, Srivastava's research suggests that the use of behavior settings as a central unit of measurement may allow extensive and well quantified assessment of the institutional process and its effects on individual functioning.

It was the attempt to apply measures of the behavior setting to the task of program evaluation in a state hospital service delivery system which resulted in the early pilot studies subsequently used as a partial basis for the ongoing study of black single parent families (O'Connor and O'Connor, 1977). The behavior setting as a unit of observation could be applied both to the hospital environment and to subsequent descriptions of community participation during post-hospital followup. When applied in this manner, although patient records reflected a wide range of prescribed activities, actual observation of potential settings revealed that the interdependence of activities were approximately at the K-18 level, suggesting an environment which was essentially a homogeneous aggregate of activities largely attended, supervised, and physically supported by the same staff and patient participants. Because administrative and programmatic changes designed to

shorten length of stay were a focus of the evaluation effort, the K-18 "activity clusters" were analyzed by number of days hospitalized for the patient population. The subgroup showing an extreme decrease in hospital days (to approximately one week) showed a distinctly different pattern of environmental participation than a second and somewhat larger subgroup which demonstrated a moderate increase in length of stay. The decreased stay group interacted primarily with medical staff who were directly supervised by the top level of administration within the facility; almost all activities involved evaluation, processing, pre-discharge planning, and discharge paperwork. On the other hand, the increased stay group interacted primarily with aide staff on the wards and engaged primarily in routine scheduled ward activities; ward staff are jointly supervised by both ward level staff and middle management supervisors on a departmental basis. In essence, the administrative pressure for decreased length of stay appeared to have resulted in a "two track" system in which some newly admitted patients were almost immediately discharged while others continued in the traditional program with reduced contact with professional personnel. Mean length of stay and measures of mental status on discharge were both improved. Yet followup suggested that the "administratively treated" brief stay group showed no change in community participation following hospitalization; the "ward routine" group with increased length of stay showed a reduction in range of activities, numbers of settings entered, level of participation, and proportion of time spent outside the home.

Person and Setting Interaction

The data generated in the studies previously described in turn raise a more basic question with respect to the interaction of persons and settings.

While the impact of the environment is assessed through the use of behavior settings as observational units, the findings suggest an interactive process which includes the contribution of individual characteristics.

The relevance of the interactionist position with respect to theoretical models and approaches to design has been demonscrated in a number of studies. For example, Hodges (1968) found an interaction between manifest anxiety and situational condition of threat. Similar findings have been noted in relation to academic achievement (Domino, 1971), anxiety (Ekehammar, Magnusson and Ricklander, 1974) and honesty (Bishop and Witt, 1970). In terms of therapeutic interventions, Anchor, Vojtisek and Patterson (1973) reported that a self-disclosure technique was more successful with high trait anxious patients. Sarason (1968) found that high trait anxious patients tended to view evaluative comments by therapists as more threatening when compared to less anxious clients. Further interaction effects have been reported in the case of speech anxiety and desensitization (Meichenbaum, Gilmore and Federavicino, 1971) authoritarianism and therapy structure (Canter, 1971) and smoking behavior in relation to several therapeutic techniques (Best, 1975).

In terms of environmental conditions and mental health, Rausch and his associates (1959, 1960) demonstrated an interaction between person and setting in a hospital ward. Endler, Hunt and Rosenstern (1967), using three different samples, found that individuals, settings, and individual-setting interactions all contributed significantly to overall variance in the case of anxiety. Moos and his associates (1968) indicated that staff and patient responses to a number of different ward environments could be analyzed for each of five descriptive measures specifying the extent to

which individual differences, setting differences, and person-setting interactions contribute to overall variance.

Both behavior setting measures and individual measures in an interactive design were used by Hume (1977), who compared two groups of male elementary school children selected as unusually well adjusted or poorly adjusted by the use of an instrumented multiple rater approach. Categories of community participation were derived by post hoc inspection of the activities involved in settings. Following a similar approach, Klassen (1977) obtained a sample of 484 subjects participating in 16 treatment facilities for substance abusers. Interviews were conducted with each subject using behavior setting measures prior to, during, and following treatment participation. The 6,835 settings were then subjected to cluster analysis to develop a reliable taxonomy of community participation areas. The independent clusters derived were: work, education, public recreation, social, public agency, health and mental health, commercial, family, private, and transit.

The analysis of treatment outcome data (O'Connor and Klassen, 1978) suggested critical subsets of variables related to mental health status. While some treatment effects were noted, the sociodemographic characteristics of treatment participants and the contribution of community participation accounted for the majority of explained variance. The data suggest that molar organizational and community variables such as those represented in the work of ecological psychologists do impact behaviors in the clinical context. At the same time, specific subsystems such as treatment programs or family systems may have critical differential effects. In Hume's (1977)

research, patterns of interaction between the family and the surrounding community were significantly related to the rated adjustment of the subject son. We would conclude then, that a multilevel interaction occurs with unknown magnitudes of effects or proportions of variance potentially involving individuals, family systems, other subsystems within the community, and molar community variables.

Selected Research: The Black Single Parent Family

As noted earlier, critical review of research of the psychosocial development of black youth has rejected positions which either assume an isomorphic relationship between disadvantaged situation and personal dysfunction, or which assess characteristics without consideration of the constructive choices which may be made in interaction with the immediately accessible environment. The family from this perspective is viewed as an organization which provides both interactive experiences and access to the environment; the view is essentially equivalent to Gladwin's (1967) position that social competence develops out of the interaction of individual and surrounding system. Social competence theories have pointed out that the variety of social systems in a community are relatively closed and require the development of specific patterns of behavior for particiation (Foote and Cotrell, 1955).

Where black family systems are specifically concerned, family mediation and the perceived environment have been related to psychological variables such as self esteem. Rosenberg and Simmons (1973) have suggested that blacks do not in fact have lower self esteem than whites if the relevant aspects of the social environment are considered, a position supported by no less than nine other studies (Taylor, 1976). Many of the factors assumed to reduce self esteem or produce other psychological dysfunctions among

black adolescents (for example, low marital status, poverty, broken family structure, poor school conditions) have not on close examination been consistent with anticipated consequences (Wilkinson, 1970). And while family systems literature in general has emphasized the internal processes of the family unit, the impact of the surrounding community on the family as a system is also relevant (O'Connor and Stachowiak, 1971). The cohesion of the family may be related to both the internal adjustment of its members and the external demands with which its members must cope (Hume, O'Connor, and Lowery, 1977). Thus, neither family process nor community circumstances alone may be sufficient to predict the behavior of members over time.

Subjects

Subjects were originally chosen from a list of 16 and 17 year old black males obtained from the cumulative records of high schools in the Kansas City, Missouri school district. Thus rather than being preselected for disadvantaged or dysfunctional status, each subject had at least entered public high school. Each youth was in full time residence with his mother in the metropolitan region during all significant child rearing phases from infancy onward so that community participation and demographic data could be verified. A total of 445 qualified potential respondent families were identified in which mother had operated as the sole parent since her son's preschool years, of whom 101, or 22%, were randomly selected, agreed to participate, and completed all interview phases.

Virtually all of the families represented were at or near the poverty level in terms of annual income; however, use of public assistance was primarily as a supplement to income rather than as a primary source of support. In the sample as a whole, most of the mothers had experienced an early first pregnancy (ages 13-20), and were married at the time of the

birth of the subject son. The frequently mentioned extended family arrangement was an uncommonly observed finding; relatives were rarely members of the household and the only significant family member who might have played a supportive role was the mother's mother, although indications in some cases suggest that mother's brother may have an influence on the son.

Measures

A modified version of the ecosystem assessment record (O'Connor and Klassen, 1978) was administered to each son and mother. The ecosystem assessment record is a structured questionnaire to assess participation in specific behavior settings as determined by Barker's (1968) K-21 procedure. Each setting was rated to determine the primary pattern of behavior within the setting corresponding to one of thirteen community areas: work, recreation, trafficways, education, public agencies, public shops, church, financial, physical health, mental health, legal, social, and home.

Within each of these areas or types of settings, specific ratings or measures of either community participation or subjective experience may be obtained. For purposes of this research, percentage of time based on hours of participation in settings was recorded for each subject son. For each mother, in addition to demographic data, three measures were obtained for each area: percentage of time measured by number of hours in settings, numbers of settings entered within each of the 13 areas, and socialization practices as self reported by each mother. These measures were selected based upon prior research suggesting that each assesses somewhat different levels of process within the total ecosystem. Socialization practices appear to reflect the internal functioning of the family unit as perceived by mother; the measure has appeared relatively robust over time, reasonably

reliable in terms of retrospective recall, and correlates with a number of other measures reflecting the emphasis in child rearing practices and strategies adopted by each mother. In addition to this intrafamilial variable, mother's percent of time is reflective of her actual pattern of participation and proportion of time within the home and in specific community settings; as such, differential patterns of community activity involving the sole parent are reflected, indirectly suggesting at least a part of the pattern of interaction between the family system and the surrounding community. The third measure, number of settings entered for each of the 13 areas, has correlated in prior research with ratings and subjective perceptions of community resources. On an aggregate level for the sample, the number of settings entered for each of the participation areas provides an index of available community resources or participation opportunities. Thus, the three measures obtained for mothers reflect intrafamilial process, family and community interaction, and molar community resource characteristics.

Procedures

The ecosystem assessment measures were obtained for each participating mother and subject son at son's age 16 or 17. Although all sons had entered high school, a small proportion had dropped out, and about four percent had already graduated. Thus, the time frame selected represents a period of transition during which patterns of community participation become of critical importance for black youth.

In addition, retrospective interviews were obtained with mothers covering each of the ecosystem assessment variables for three child rearing stages: preschool years, elementary school years, and junior high school years of the subject son. Because of the problems with retrospective inter-

viewing, these data should more properly be considered mother's perceptions of socialization practices, numbers of settings, and hours in settings during these time phases. However, while the actual validity of such measures is difficult to assess, two positive considerations should be noted. First, the nature of the measures involves such molar patterns of behavior that reasonably accurate recall is possible and modest recall error is acceptable (i.e., most individuals can accurately recall working fulltime or not working during a particular prior life phase, and some inaccuracy in number of hours worked is not likely to change the ratio of work hours to other significant activities on a rank order basis). Ecological measures have generally proven robust over time. Second, repeated reliability measures were obtained by using duplicate interviews for the same time period conducted on different occasions, different interviewers regarding the same time phase and same measures, and a variation in the interview procedures suggested by Hume which assesses participation not by category but by time survey or time diary methods. Overall reliability assessed on a rank order basis ranged between 92 and 97%. Additional details regarding the measurement techniques and procedures may be seen in the materials by the authors previously cited.

Data Analysis and Results: Descriptive Findings

In order to reduce the data across 13 areas for each measure to descriptive patterns of behavior, an oblique rotation factor analysis was performed for each measure. For percentage of time, data were converted to logs on the basis of percentage of time for waking hours over one week period to avoid skewed distributions where a few unusual or extreme scores were obtained. Because so little is known regarding the behavior of this population, these results are of some interest on a purely descriptive level.

For each of the tables which follow, factor loadings are shown only for those variables which contributed a major proportion of variance to a particular factor.

Insert Table 1 here

Table 1 shows the results of factor analysis for son's percentage of time. The distribution of activity by hours indicates five significant dimensions or patterns of activity. Factor 1, with a high social and negative home loading, indicates a characteristic pattern of involvement in the immediate surrounding informal community network; a low factor loading score would reflect a lack of involvement outside the home as well as a major proportion of time spent at home. Factor 2 reflects an employment dimension; the negative loading for education may well be an artifact since older subjects were likely to spend fewer total hours in school related activities while working more hours. Factor 3, reflecting involvement with the legal system, is a distinct dimension of activity since virtually all legal contacts involved questioning for suspected delinquent acts, arrests, court contacts, probation and the like; a relatively small proportion of the population (15Ss) had any such legal contact however. Factor 4 reflects a pattern of social activity outside of the home at variance with the setting usage reflected in Factor 1. There are apparently two dimensions of social activities: staying at home versus being involved in informal social contacts (Factor1) and involvement in organized social activities such as the church versus the informal contact network (factor 4). Factor 5 must be interpreted largely with reference to the complete questionnaire and anecdotal material; the high loading for shops or commercial

settings might be most accurately described as indicating "hanging out" behavior which includes congregating on the street corner, around a pinball machine in a commercial establishment, and the like.

Table 2 indicates the results of factor analysis of mother's demographic (DEMO) data. These factors are primarily of significance as descriptors of the population and as variables to be considered in subsequent analyses of the interaction of mother and sons variables. In any subsequent analysis, mother's age, number of children and dwelling type and categories should be considered. (Dwelling type refers to houses versus apartments, etc.; category refers to rented versus owned housing. A higher loading on this factor suggests poorer housing.)

Insert Table 2 here

Table 3 shows the results of factor analysis of mother's socialization practices (SCPR) for each of the four time phases covered; the analysis was conducted separately on this variable for each of the four time periods.

Insert Table 3 here

As noted, the composition and order of the factors which emerge vary somewhat from stage to stage, but the basic pattern of results is consistent. The specific emphasis on work and on education are seen in the preschool and elementary years. Work and education merge by senior high school, and the emphasis on economic or financial attainments emerges as a separate factor. Social involvement is seen through all stages, but the combinations or patterns of specific emphasis vary. There is consistently a distinction between the informal social involvements often associated with recreation or public settings versus the kind of involvement reflected in church activities

or formally organized events. A specific factor for mental health emerges during elementary school years, negatively related to church and home involvement. By the senior high school phase, four distinct factors are noted: the first involves employment and educational activities and is associated with home, the second involves church, the third a generally negative loading for recreational and social events, and the fourth reflecting specific economic status.

The pattern of these findings is difficult to interpret without further consideration of the other measures and the interaction between mothers' and sons' variables. Table 4 reflects mother's actual number of settings (STNG), as noted earlier a measure which is highly related to the availability of settings within the accessible community.

Insert Table 4 here

Work settings are again noted across all four stages, with educational settings noted in the first two stages and disappearing by the junior high school stage (perhaps a reflection of mother's increased age and tendency to become less involved in her own training or educational endeavors as well as those at son's school). The pattern of social activities again reflects the informal network versus formally organized patterns noted for sons and noted for socialization practices. The mental health factor again emerges during elementary and junior high school, associated with legal contacts by the junior high school age and replaced by a combination of legal and public agency (often public assistance and agency supervisory involvements) by the senior high school phase. In a very preliminary sense, number of settings accessible to mothers in the community suggests a differential pattern of resource availability.

Table 5 indicates mother's actual particiation in terms of time proportions (PCNT).

Insert Table 5 here

These data show the most consistency and may well represent the most robust and reliable measures available. Factor 1 for all four stages is a work versus staying at home dimension. Factors 2 and 3 prior to the high school years reflect two patterns of involvement outside the home, one in which time spent is largely in commercial settings relating to routine homemaking and maintenance activities while the other reflects the use of organized social network settings of which church is most predominate. By the high school years, these patterns have shifted somewhat or are at least reflected differently in terms of proportion of time: the public agency and legal loadings on Factor 2 during the high school phase are specific to those mothers whose offspring have encountered some substantial legal-adjustment difficulties, but are not defined within the realm of the mental health system. Factor 4 during the high school years, a single large loading on the mental health variable, reflects a different definition of an apparent adjustment difficulty involving either mother or son. Factor 3 reflects the dimension of self-financed activity outside the home; whether employed or not; it appears that mother's involvement outside the home becomes distinguished not so much by the extent of social interaction, but by her use of purchased services and activities.

Having identified dimensions of activity on the part of midadolescent black males and dimensions which reflect socialization practices, settings available and mother's pattern of actual participation, the question now arises as to potential interrelationships among these variables. It should

be noted at this point that substantive methodological and measurement problems have already been encountered. Given that relatively little was known of the population and that the focus of interest was on individuals in the natural situation or context, the choice of factor analytic techniques reflects only one of several imperfect options. If a comparison group design had been used based on a priori categories, the selection of the criteria for dividing the subgroups or comparison conditions allows for the possibility of comparisons based on variables which actually contribute a relatively insignificant proportion of the total effects in the interactive system. On the other hand, if the total population were subdivided by, for example, cluster analytic techniques, then comparison groups would have been empirically derived; however, another set of problems emerges in determining the interaction among clusters. Techniques for assessing the relationships among clusters are complex and relatively unfamiliar, as are analytic procedures in which clusters are used as comparison groups in a further statistical treatment such as analysis of variance. The selection of factors reflects a decision to describe the processes in a very complex system with a large number of variables and potentially interactive levels of process in terms of dimensions of activity which can then be assigned to subjects as scores, i.e. factor loading scores. The decision is justified in statistical terms only to the extent that the determinant of the matrix, eigenvalues, and factor loadings are of sufficient magnitude to justify further treatment. But given that factors with an apparent magnitude and sufficient face validity for interpretation are derived, further analysis can proceed in a number of directions. For example, scattergrams can be plotted reflecting simple correlations among factors. While the relationship between any two specific factors becomes clear, the aggregate of data becomes even more complex and

difficult to interpret. On the other hand, as was selected in this specific research, factor loading scores for each subject may be entered in a multiple regression balanced to avoid bias by entry order, so that a pattern of results may be further inspected. If the results reported are significant by tests of association (probability level) and are presented in terms of standardized beta weights to reflect the partitioning of variance, then a pattern of results may emerge which is interpretable.

Since the primary focus of the data presented involves the illustration of potential interactions or relationships among levels of organization as well as among subsystems, the multiple regression format was selected since results can be displayed in a familiar fashion. Table 6 displays the multiple regressions of variables from mother's questionnaires by stage related to son's percentage of time. Only those results which are significant at the .05 level or better are displayed.

Insert Table 6 here

Son's Factor 1, reflecting social versus home involvement, is related only to the community resource measure for all four stages. The pattern suggests that the range of accessible resources as engaged by the subject mother is related to son's subsequent pattern of social versus isolate behavior; but more significantly the absence of either mother lifestyle variables or socialization practices among the significant results may be noted. Son's percentage of time Factor 2, reflecting occupational activities, shows a number of significant relationships to both the community resource level and to mother's actual lifestyle or pattern of participation by percentage of time; but again, socialization practices reflecting internal family processes are not significantly related with the exception of sociali-

zation practice Factor 3 directly reflecting financial interest, during the junior high school stage.

Son's percent of time Factor 3, reflecting legal difficulties, demonstrates a distinctly different pattern; the community resource relationships are by contrast less important, but child rearing practices or internal family process in combination with demographic characteristics related to family and specific patterns of lifestyle by mother are all contributory.

Especially striking is the consistent relationship of mother's age and lack of socialization practices in traditional "positive" areas such as church or education as the son grew older. Also, mother's activities tended to revolve around more problem oriented services (e.g., legal, mental health, and public agencies). Son's Factor 4, reflecting the use of organized and formal resources for social interaction, is of interest because its pattern of relationships with mother's variables contrasts with the pattern noted for informal social interaction in son's Factor 1; that is, the tendency to social involvement or lack of involvement on an organized basis is related not only to the accessible community resources but in combination with socialization practices and mother's lifestyle patterns.

These mothers themselves were often involved in and stressed organized activities (such as in churches or schools) as opposed to loosely organized social areas. Interestingly, their families were small. In contrast, the boys described by Factor 5 as "hanging out" in shops are from large families. The factor relates most clearly to community resources and internal family processes, but shows a relative absence of relationships to mother's own lifestyle participation patterns.

When viewed across the son's factors, the contribution of mother's demographic characteristics, socialization practices, and community resources is relatively substantial from time phase to time phase; the number of significant relationships and proportion of variance increases dramatically with time, however, in the case of mother's own lifestyle. Mother's actual proportioning of time appears to have the greatest impact during the junior high and high school stages. Viewed from another perspective, specific activities such as pattern of social involvement appear highly related to accessible community resources; others, such as involvement in legal difficulties, appear to be more largely related to processes at the intrafamilial level. Such specific relationships must be viewed, however, with some caution in terms of inference. The repetitive and consistent patterning of results does provide support for the central thesis that behavioral patterns such as proportion of activities on the part of midadolescent subjects may be substantially impacted by several levels of process in the ecosystem.

Discussion and Implications

Population and Context

As noted at the outset of this paper, both the studies reviewed and the data presented were intended primarily to illustrate an ecological perspective which offered at least a moderate contrast to more traditional approaches. The assumptions which governed the selection of the black single parent family population and the contextural measures selected demonstrate this perspective. Traditionally, an assumptive effect can be noted in much of the literature in this area: single parent families have been viewed as likely to be less functional than two parent families, black adolescent male populations have often been preselected for delinquency or mental health contacts,

and the effects of both poverty and racism have often been assessed primarily in terms of negative outcomes. The patterns of community activity on the part of both sons and mothers reflect a different perspective which is no doubt reflective of the different bias involved in the selection of subjects from among high school entrants; only sons Factor 3 reflects what might be considered in traditional terms a dysfunctional behavior, and the actual percentage of black adolescent boys with more serious delinquency or mental health contacts was extremely small (around 3%). The pattern can easily be interpreted as supportive of the strengths of the black single parent family, and the data lend themselves to speculations about effective coping strategies on the part of black single parent mothers.

There is a suggestion that specific (if perhaps unintentional) child rearing strategies were adopted on the part of the mothers which focused largely on the management of the relationship between the family, mother's own pattern of participation, and the available settings which provide resources within the community. It further appears that particular outcomes which are assumed to be related to the pattern of familial and community processes are not related to a single type of system or single level within the total system: some dimensions of behavior may be impacted by one type of setting while other patterns are impacted by both a different level and activity area. Perhaps for a given individual, different patterns of behavior in that individual's lifespace have been influenced by the individual's interaction with quite different aspects of the total system process.

If we wish to consider the implications of these data for preventative mental health efforts, admittedly throwing inferential caution to the winds,

several interesting patterns can be noted. First, one of the most powerful and consistent supports available to mother may very well be employment and educational opportunities: these potentially impacting specific patterns of psychosocial functioning in midadolescent offspring. Second, the consistency of informal social networks within the community and the use of agencies which are not traditionally involved in mental health (i.e. churches) emerges as a second critical area to be considered. As noted in earlier research (Wilkinson and O'Connor, 1977) there is an inverse relationship between the use of formal mental health resources and the use of churches and informal networks; the use of formal mental health resources appears more likely in the case of those families for whom other resource networks are extremely impoverished and is associated with less favorable outcome.

These inferences gain some modest credibility in the context of other ecological research. If the surroundings do impact behavior in a forceful manner, the optimal environment would provide a wide range of resources, relatively small settings which are easily accessible, a high participation zone, in an optimal manning level for both increasing competence and satisfactions. Considering that most mental health contacts involve a small proportion of the individual's total time, tend to be intermittent or temporary, do not involve a high performer role, and are most often implemented in large and impersonal treatment settings, then it becomes likely that much of the influence on lifestyle and mental health status over extended time periods may derive from the multiplex of settings in which the individual is embedded (O'Connor, 1977). Hume's data with respect to intact white suburban families would support such a view. By contrast,

if preventative mental health efforts and services are based largely on data with a preselected dysfunctional population and measures of relatively molecular psychological or interpersonal process, then the only possible models which emerge will focus on such areas as early detection and screening, parent effectiveness in a dyadic communication context, and the like. More molar processes, for example the effects of school size, may not be included in such a perspective.

Organization and Context

If the data suggest assumptions on which further study may be based, a second area of application might well involve the relationship between mental health organizations and the surrounding community. The first issue which arises in this context is that of service delivery; the structure and organization of mental health efforts. Traditionally, mental health institutions operate on an essentially pyramidal structure; the size of the organizational unit can be extended, embedding the client in an organization which minimizes the range of activities and level of functioning of the identified patient. It is interesting to note the structural differences between private practice psychotherapeutic service delivery and public institution delivery models. In the private practice setting, accessible only to those with substantial resources, the most highly trained professional engages almost exclusively in a dyadic or small group relationship with a service recipient; administrative functions, paperwork, scheduling, telephoning, and similar functions are generally relegated to adjunctive or nonprofessional personnel. By contrast, in the large organizational structure of most community mental health centers, it is adjunctive personnel who have a substantial share of patient contact (in the extreme on an inpatient service) and the more highly trained professional personnel who tend to fulfill

administrative, legal paperwork, and supervisory functions. While data exist in abundance on the optimal psychosocial environment for maximizing satisfaction and competence, for example in the numerous studies of business organizations, such data have infrequently been applied to the delivery of mental health services. Team treatment systems, continuity of care, tracking and transfer systems, standardized treatment assignment and routing procedures may all operate to make the client as little an individual as possible while client and therapist struggle to achieve the most personal and individual human relationship possible in that context. If the single parent data have more general application, such large system processing may be undesirable.

A second perspective on the service delivery problem emerges when the relationship of the organization to community resources is considered. If the community itself is a massive pyramidal structure in which competence and power concentrate at the top and conformity is progressively demanded at the geometrically expanding base, then the system can be viewed as containing a finite amount of resources which are not distributed equally, but which may be obtained by individuals only by appropriate performance in a given ecological niche. If this is the case, then the mental health system struggles with the revolving door largely at the mercy of the larger surrounding system; for that portion of the client population who lack competencies and resources, an effective psychotherapeutic intervention within the context of the institution may return the individual to a community in which adequate functioning and the maintenance of mental health are not possible; if the individual is sufficiently credentialed and obtains the necessary competencies

to occupy a more desirable and less stressful niche, then the potential effect may be to create a new mental health casualty. In this sense, the mental health institution may be unwittingly cast in the role of social scavenger, participating in a triage system in which some individuals may be placed in niches designed to absorb excess population and maintain less functional individuals without loss of overall social control. The single parent data suggest an alternative role, with a subsystem serving as mediator and access point to the community.

This in turn raises questions as to the focus of treatment outcome research: what is considered an outcome and how it is assessed may have a major impact on the development and delivery of services. If, for example, the variables which were seen to have significant impact in the single parent study were applied to treatment outcome, then we might well consider the effectiveness of mental health efforts in such terms as the individual's capacity to gain and hold employment, function in social networks, utilize formal community resources, and the like. Such an approach, illustrated in the state hospital (O'Connor and O'Connor, 1977) and drug treatment (O'Connor and Klassen, 1978) studies provided a view at variance with traditional outcome findings. While it is unfair in the extreme to burden mental health facilities with the responsibility for an individual's total functioning, it may not be inappropriate to recognize the limited role and the appropriate limits of mental health organizations. There are at least serious questions as to the capacity of mental health interventions to deal with such contemporary social problems as epidemic substance abuse, child abuse, the maintenance of successful marital relationships, the prevention of adolescent pregnancies, and a host of other problems which have been welcomed into the mental health

arena with an evident lack of discretion.

Finally, the studies reviewed in aggregate raise interesting questions as to the definition of health and illness. On an intrapsychic basis, the concept of the mental illness and treatment techniques which are based on that assumptive view may be appropriate. When the range of potential influences on behavior is considered more broadly, the distinction between health and normalcy becomes an issue. When we consider an individual mentally healthy, well adjusted, or normal are we in fact assessing positive individual functioning or conventional behavior? Are definitions of mental health and to a considerable degree the goals of large system mental health services more in support of social control than individual differentiation, and more designed for social cloning than personal growth? It is tempting, for example, to interpret the single parent findings as reflecting positive mental health and effective functioning on the part of the subject sons; but the reality, which extends to a variety of other studies, is that we cannot distinguish between positive and effective personal functioning and ordinary middle class conformity. Klassen's (1977) treatment outcome data, for example, suggest that individuals who were seen as most improved by the treatment facility were often those who changed least but were most typically middle class in patterns of behavior and demographic characteristics on treatment entry.

Treatment and Context

While it is evident that an ecosystem perspective has some reasonable if speculative applications to the more molar aspects of clinical and community mental health issues, the application of this viewpoint to the therapeutic process itself has been minimal. While data are lacking, the assumptions might still be applied. The community assigns functions to the therapeutic process which are recognized by the community at large, the

client, and the therapist. Thus, clinical process on even a molecular level occurs in a context; the therapist, client, and the psychosocial setting form a single and complementary unit. The therapist and client play complementary roles as does psychopathology and treatment within the context of the total ecosystem. Psychotherapy exists for psychopathology which is ultimately defined by the community; cultures which do not recognize a particular behavior as pathological do not recognize a related form of healing.

The clinical process may be viewed as a function of energy input and distribution in the total ecosystem: as a particular pattern of activity which is impacted both by therapeutic process and by the person's interaction with the total ecosystem. From this perspective, the overall effectiveness of mental health efforts on a community level are related to the capacity of the community's substructures to distribute sufficient resources to meet the needs of community inhabitants. In this sense, psychopathology is a function of normalcy; when normal roles do not allow effective and conventional behavior, deviant roles and behaviors emerge. Psychotherapy then becomes a mechanism for the ecosystem as a whole to correct the imbalance between system demands and occupant needs. The function of the clinician may be as much to support the functioning of the system as to enhance the functioning of the individual.

In this sense, there are three contracts involved in the therapeutic process. The first is an overt contract between the therapist and client: the client presents problems both verbally and by demonstrated behavior which it is assumed the therapist can help to change. But at the same time, a more subtle contract exists between the therapist and significant others in the individual client's lifespace: to the extent that others view certain

behaviors as problems and are aware that the client is engaged in a therapeutic process, expectations for change surround the client in his or her significant life relationships. The strategy and the intervention techniques of the therapist interact with the network of anticipated change which surrounds the client outside of the therapeutic context itself. And finally, a clear contract exists between the therapist and the community at large. The therapist is empowered, so to speak, to redefine the status of an individual so that the client may begin to behave differently, present himself or herself differently, become involved in different networks and habits of behavior, join different organizations and the like. At the same time, limits are set on the power of the therapist; diagnosis and prognosis often reflect the extent to which a community will recognize changes in a person of a particular age, sex, socioeconomic level, symptom complex, and set of life circumstances.

The relationship between therapist and client is interestingly analogous to the processes inferred from the single parent study. Mother has a relationship with her child interior to the family context, but also serves as a mediator with the community as a whole and as a facilitator of access to particular systems and resources. To the extent that the analogy applies to therapeutic process, the effectiveness of the therapist may be reflected not only in the molecular techniques and interactional processes which occur interior to the therapeutic dyad but as well in the therapist's capacity to interact directly and indirectly with the community at large.

Table 1

Factor Loadings of Son's Percentage of Time

Factor 1 Area	Loading	Factor 2 Area	Loading	Factor 3 Area	Loading	Factor 4 Area	Loading	Factor 5 Area	Loading
Social	.56	Work	.76	Legal	.78	Social	-.58	Shops	-.61
Home	-.94	Fin.	.47			Pub.Agen.	.38		
		Educ.	-.32			Church	.35		

Table 2

Factor Loadings of Mother's Demographic Characteristics

Factor 1 Area Loading		Factor 2 Area Loading		Factor 3 Area Loading	
Age at Birth of Son	.98	# Child.	.99	Dwelling Type	.76
				Category	.92

Table 3

Factor Loadings of Mother's Socialization Practices by Stage

Stage	Factor 1 Area	Loading	Factor 2 Area	Loading	Factor 3 Area	Loading	Factor 4 Area	Loading	Factor 5 Area	Loading	Factor 6 Area	Loading
1	Shops	.99	Tfwy.	.68	Work	.43	Pub.Agen.	.45	Ecu.	-.75		
	Church	.43	Social	-.61	Fin.	.72	Legal	.70	Health	-.71		
2	Educ.	.66	Work	.99	Ment.Hlt.	.63	Fin.	-.71	Social	-.67		
	Rec.	.56			Church	-.66						
					Home	-.60						
3	Church	.98	Pub.Agen.	.68	Fin.	.84	Ment.Hlt.	.72	Social	.84	Educ.	.61
			Home	.48								
4	Home	.96	Church	.78	Rec.	-.52	Fin.	.44				
	Educ.	.42			Social	-.54						
	Work	.49										

Table 4

Factor Loadings of Mother's Number of Settings by Stage

Stage	Factor 1 Area	Loading	Factor 2 Area	Loading	Factor 3 Area	Loading	Factor 4 Area	Loading	Factor 5 Area	Loading
1	Social	.96	Rec.	.69	Ecu.	.54	Pub.Agen.	.66	Work	.57
	Home	.54	Tfwy.	.55					Home	.46
			Shops	.53						
2	Tfwy.	-.63	Rec.	.57	Men.Hlt.	-.86	Work	.98		
	Home	.55	Educ.	.72						
3	Work	.67	Men.Hlt.	.77	Shops	.52	Tfwy.	.48	Pub.Agn.	.59
	Fin.	.78	Legal	.56	Social	.67	Rec.	.65		
4	Rec.	.62	Shops	.57	Pub.Agn.	.56	Church	.66	Work	.66
	Tfwy.	.76	Social	.54	Legal	.59			Fin.	.48
	Home	-.51								

Table 5

Factor Loadings of Mother's Percentage of Time by Stage

Stage	Factor 1 Area	Loading	Factor 2 Area	Loading	Factor 3 Area	Loading	Factor 4 Area	Loading	Factor 5 Area	Loading
1	Work	-.91	Shops	.45	Educ.	.48	Legal	.87	Pub.Agn.	.60
	Home	.86	Health	.96	Church	.42			Social	-.51
					Fin.	.44				
2	Work	.82	Shops	.54	Rec.	.55	Social	.56		
	Home	-.76	Health	.54	Church	-.65	Home	-.64		
					Ment.Hlt.	.53				
3	Work	.75	Rec.	.73	Educ.	-.57	Ment.Hlt.	.65		
	Home	-.90	Church	.46	Shops	.59				
			Health	.44						
4	Work	.82	Rec.	.50	Rec.	.48	Ment.Hlt.	.94		
	Home	-.83	Pub.Agn.	.60	Fin.	.74				
			Legal	.62						

Table 6

Multiple Regressions of Mother Variables (by Stage)

With Son's Percent of Time Factor Loading Scores

Stage	Independent Variable	Beta	% Variance
Son's Time 1:	Social/Home		
1	STNGf1 social, home	.44	19.46
	STNGf2 rec, tfwy, shops	-.20	22.70
2	STNGf1 home 1-tfwy	.39	15.30
3	STNGf1 work, fin	.26	10.14
	STNGf4 tfwy, rec.	-.26	16.78
4	STNGf2 shops, social	.27	7.02
	STNGf1 rec, tfwy and home	-.20	10.91
Son's Time 2:	Work, Finance/Education		
1	STNGf2 rec, tfwy, shops	-.31	5.92
	DEMOf3 housing	-.18	8.65
	PCNTf5 pub.ag 1-social	.17	11.46
2	NONE SIGNIFICANT		
3	STNGf5 pub. ag.	.20	5.68
	SCPRf3 fin.	-.26	10.02
	PCNTf1 work1-home	-.19	13.98
	STNGf2 men. hlt., legal	-.17	16.70
4	PCNTf4 men. hlt.	-.19	3.07*
	STNGf5 work, fin.	.17	5.99
Son's Time 3:	Legal		
1	SCPRf5 educ, health	-.33	5.62
	STNGf1 social, home	-.22	11.69
	DEMOf1 age	.23	16.46

Table 6 (continued)

Stage	Independent Variable	Beta	% Variance
Son's Time 3:	Legal (continued)		
2	SCPRf5 social	.19	3.62*
	DEMOf1 age	.16	6.15
3	STNGf2 men.hlt., legal	.28	6.53
	PCNTf1 work 1-home	-.26	11.43
	STNGf4 tfwy, rec.	.15	13.78
	DEMOf2 #children	-.19	16.33
	SCPRf6 educ.	-.14	18.08
4	PCNTf2 rec., pub.ag., legal	.33	12.75
	PCNTf4 men.ht.	.28	19.43
	DEMOf1 age	.14	21.74
	DEMOf2 #children	-.16	24.19
	SCPRf2 church	-.15	26.21
	PCNTf3 rec., fin.	-.13	27.86
Son's Time 4:	Public Agency, Church/-Social		
1	SCPRf2 Tfwy 1-social	-.31	12.14
	PCNTf3 educ, church, fin.	.35	16.77
	STNGf5 work, home	-.27	22.39
	DEMOf2 #children	-.21	26.46
2	STNGf1 home1-tfwy.	-.06	13.58
	PCNTf3 men.ht./-rec.,church	-.21	17.48
	SCPRf5-social	.44	22.30
	DEMOf2 #children	-.24	26.44
	SCPRf1 rec., educ.	.22	30.23

Table 6 (continued)

Stage	Independent Variable	Beta	% Variance
Son's Time 4 (cont'd)			
3	PCNTf2 rec, church, health	.49	18.55
	STNGf3 shops, social	-.27	25.85
	SCPRf4 men.hlt.	.16	28.50
4	STNGf1 rec, tfwy/-home	.22	16.90
	SCPRf1 work, educ., home	.19	19.52
	PCNTf2 rec, pub.ag., legal	.39	21.77
	STNGf3 pub.ag, legal	-.20	24.07
	DEMOf2 #children	-.13	25.77
Son's Time 5: - Shops			
1	DEMOf2 #children	-.25	5.09
	SCPRf3 work, fin	-.18	9.52
	SCPRf4 pub.ag, legal	-.22	11.94
	STNGf2 rec, tfwy, shops	.19	14.04
	STNGf3 educ.	-.18	16.28
2	DEMOf2 #children	-.22	5.09
3	STNGf2 men.hlt, legal	-.34	8.03
	PCNTf1 workl-home	.14	17.63
	SCPRf3 fin	-.21	22.66
	SCPRf5 social	-.15	25.23
	STNGf5 pub.ag.	-.16	27.64
	SCPRf2 pub.ag., home	.16	29.49

Table 6 (continued)

Stage	Independent Variable	Beta	% Variance
Son's Time 5 (cont'd)			
4	DEMOf2 #children	-.21	5.09
	STNGf2 shops, social	.28	8.59
	SCPRf2 church	-.23	12.68
	STNGf3 pub.ag.legal	-.19	15.04
	PCNTf3 rec, fin.	-.17	17.03

*F value for this coefficient significant at .06 level.

Anchor, R.N., Vojtisek, J.L., and Patterson, R.L. Trait anxiety, initial structuring, and self-disclosure in groups of schizophrenic patients, Psychotherapy: Theory, Research, and Practice, 1973, 10, 156-158.

Barker, R. Ecology and motivation. In Jones, M. (Ed.),Nebraska Symposium on Motivation, University Nebraska Press, 1-49, 1960.

Barker, R.G., Ecological Psychology, Stanford: Stanford University Press, 1968

Barker, R. and Gump, P. Big School, Small School, Stanford Univ. Press, 1964

Baughman, E. Black Americans. New York: Academic Press, 1971

Bechtel, R. B., The undermanned environment: A universal theory? EDRA, 1974, 5, 227-244.

Best, J.A. Tailoring smoking withdrawal procedures to personality and motivational differences. Journal of Consulting and Clinical Psychology, 1975, 43, 1-8.

Bishop, D.W., and Witt, P.A. Sources of behavioral variance during leisure time, Journal of Personality and Social Psychology, 1970, 16, 352-360.

Burgess, E.W. The family as a unit of interacting personalities. Family, 7:3-9, 1926.

Canter, P.M., Authoritarian attitude, degree of pathology, and preference for structured vs. unstructured psychotherapy in hospitalized mental patients, Psychological Reports, 1971, 28, 231-234.

Domino, G. Interactive effects of achievement of orientation and teaching style on academic achievement, Journal of Educational Psychology, 1971, 62, 427-431.

Ekehammer, B., Magnusson, D., and Ricklander, L. An interactionist approach t the study of anxiety, Scandinavian Journal of Psychology, 1974, 15, 4-14.

Endler, N.S., Hunt, J.McV., and Rosenstein, D.J., An S-R Inventory of Anxiousness, Psychol. Monographs (1962), 76 (17, Whole No. 537)

Gladwin, T., Social Competence and Clinical Practice, Psychiatry, 30 (1), 30-43, 1967.

Hodges, W.F. Effects of ego threat and threat of pain and state anxiety, Journal of Personality and Social Psychology, 1968, 8, 364-378.

Hornstra, R.K., et al., Worlds apart: Patients and professionals, Archives of General Psychiatry, 1972, 27.

Hume, Nicholas, Family Adjustment and the Psycho-social Ecosystem. Unpublished doctoral dissertation, University of Kansas, 1976.

Hume, N., O'Connor, W.A., and Lowery, C.B. Family, adjustment, and the psychosocial ecosystem, Psychiatric Annals, 1977, 7(7), 8, 345-355.

Klassen, D. Person, setting, and outcome in a drug abuse treatment program Psychiatric Annals, 1977, 7 (8), 80-104.

Kuhn, M. Major Trends in Symbolic Interaction Theory in the Past Twenty-five Years. In Symbolic Interaction, J. Manis and B. Meltzer, eds. Allyn and Bacon, Boston, 1972.

Meichenbaum, D.H., Gilmore, J.B. and Fedoravicino, A., a group insight vs. group desensitization in treating speech anxiety. Journal of Consulting and Clinical Psychology, 1971, 36, 410-421.

Moos, R.H. Situational analysis of a therapeutic community milieu. J. Abn. Psychol., 73, 1, 49-61, 1968.

O'Connor, W.A. Ecosystems, theory and clinical mental health, Psychiatric Annals, 1977, c. 7, (7), 63-77.

O'Connor, W.A. and Klassen, D., Community participation, drug use, and demographic client characteristics in relation to treatment type and assignment. American Journal of Community Psychiatry (In revision) 1978

O'Connor, W.A. and O'Connor, K.S. An ecological approach to treatment. In Berger, D. and Greenberg, P. Planning for Change in State Hospitals, New York: Springer, 1977.

O'Connor, W.A. and Staghowiak, J. Patterns of interaction in families with low adjusted, high adjusted, and mentally retarded members. Family Process, 229-41, 1972

Rausch, H.L., Ditman, A.T., and Taylor, T.T., Person, setting and change in social interaction, Human Relations, 1959, 12, 361-378.

Rausch, H.L., Fardman, I., and Lewellyn, L.G., Person, setting and change in social interaction: II, a normal control study, Human Relations, 1960, 13, 305-332.

Rosenberg, M. and Simmons, R. Black and White Self-Esteem: The Urban School Child. American Sociological Association, Washington, D.C., 1971

Sarason, I., Johnson, J., and Siegel, J. Assessing the impact of life changes. J.C.C.P., 46, 5, 932-946, 1978

Srivastava, R. Undermanning theory in the context of mental health care environments. ERDF, 5, 245-258, 1974.

Taylor, R.L. Psychosocial Development Among Black Children and Youth: A Reexamination. Amer. J. Orthopsychiat. 46 (1), January, 1976.

Taylor, R. Black Youth and Psychosocial Development: A Conceptual Framework. J. Black Studies. (in press, 1976).

Wicker, A. Undermanning, performance, and students subjective experiences in behavior settings of large and small high schools. J. Per. Soc. Psychol., 10, 255-61, 1968.

Wicker, A. Size of church membership and members' support of church behavior settings. J. Per. Soc. Psychol. 13, 278-88, 1969.

Wicker, A. and Mehler, A. Assimilation of new members in a large and a small church. J. Applied Psychol., 55, 151-56, 1971.

Wicker, A., McGrath, J., and Armstrong, G. Organization size and behavior setting capacity as determinants of member participation. Behav. Science, 17, 499-513, 1972

Willems, E. Forces toward participation in behavior settings. In Barker, R. and Gump, P. (Eds.), Big School, Small School, Stanford Univ. Press, 115-135, 1964

Wilkinson, C.B., The destructiveness of Myths, American Journal of Psychiatry, 126:8, February, 1970.

Wilkinson, C.B., O'Connor, W.A., Growing Up Male in a Black Single-Parent Family. Psychiatric Annals, 7:7, 356-362, 1977

Wilkinson, C.B., O'Connor, W.A. and Daniels, S. Family studies and the treatment of black patients. Paper, Am. Psychiat. Assoc., Chicago, 1979.

Wright, H. Children's Behavior in Communities Differing in Size. Univ. Kansas (Vols. I-III), 1969.